Applicants: Serial No.: Bjork *et al.* 09/847,539

Filed:

May 5, 2001

Page 2 of 5

Response to Restriction Requirement

Sub,

23. (New) A protein that is capable of binding to α_2M and that comprises the amino acid sequence of SEQ ID No 6 or a functional variant thereof.

- 24. (New) A protein according to claim 23, wherein the functional variant has at least 78% homology to SEQ ID No 6 over at least 30 amino acids.
- 25. (New) A protein according to claim 24, wherein the functional variant has at least 78% homology to SEQ ID No 6 over at least 100 amino acids.
- 26. (New) A protein according to claim 23 comprising one or more tandem repeats, wherein the repeated sequence is from 21 to 35 amino acids in length.
- 27. (New) A protein according to claim 26, wherein the repeated sequence comprises amino acids 59 to 86 of SEQ ID No 6 or a variant thereof that has at least 75% homology to amino acids 59 to 86 of SEQ ID No 6.
- 28. (New) A protein according to claim 23, wherein the variant is from a S. pyogenes strain other than SF370.
- 29. (New) A peptide comprising a fragment of at least 6 amino acids in length of a protein that is capable of binding to α_2M and that comprises the amino acid sequence of SEO ID No 6 or a functional variant thereof.
- 30. (New) A peptide according to daim 29 comprising a fragment of at least 15 amino acids in length of the protein of claim 28.
- 31. (New) A peptide according to claim 30 comprising a fragment of at least 20 amino acids of the protein of claim 23.
- 32. (New) A peptide according to claim 29 that is capable of generating an immune response against group A streptococcus.
 - 33. (New) A peptide according to claim 29 that binds $\alpha_2 M$.
- 34. (New) A peptide according to claim 29, comprising one or more tandem repeats, wherein the repeated sequence is from 21 to 35 amino acids in length.
- 35. (New) A peptide according to claim 29 comprising amino acids 59 to 86 of SEQ ID No 6 or a variant thereof with at least 75% homology to amino acids 59 to 86 of SEQ ID No 6.

3

Suby

Applicants:

Bjork *et al.* 09/847,539

Serial No.: Filed:

May 5, 2001

Page 3 of 5

3 of 5 Response to Restriction Requirement

36. (New) A peptide according to claim 35 comprising two or more repeats of amino acids of 59 to 86 of SEQ ID No 6 or of a variant thereof with at least 75% homology to amino acids 59 to 86 of SEQ ID No 6.

500)

37. (New) A peptide according to claim 29 wherein the fragment has at least 78% homology to SEQ ID No 6 over at least 30 amino acids.

38. (New) A peptide according to claim 37, wherein the fragment has at least 78% homology to SEQ ID No 6 over at least 100 amino acids.

39. (New) A protein or peptide that is capable of generating a protective immune response to group A streptococcus that comprises:

- (i) the amino acid sequence of SEQ ID No. 6;
- (ii) a functional variant of (i); or
- (iii) a functional fragment of at least 6 amino acids in length of (i) or (ii).

REMARKS

In the Office Action dated May 23, 2002, the Examiner issued a six-way restriction requirement. In response to the restriction requirement, the Applicants elect Group I (previous claims 1 to 12 and 18 directed to a polypeptide), and in the interest of facilitating prosecution have submitted new claims directed to the invention of Group I as claims 23 -39. Further, as Applicants were also requested to limit the claims to a specific sequence the Applicants elect subject matter relating to SEQ ID No. 6. The new claims have been drafted accordingly.

For the Examiner's convenience, below is a chart that provides the bases for support for each of the new claims:

New Claim(s)	Support in the application as filed
23	previous claim 5
24	page 9, line 31 to page 10, line 1 page 7, line 1 page 8, line 15